

REMARKS

Claims 10 through 18 and 20 were presented for examination in the present application and remain pending for consideration upon entry of the instant response.

Claim 16 was objected to. The Office Action asserts that claim 16 would be allowable if rewritten in independent format. Claim 16 has been rewritten accordingly thereby placing claim 16 in condition for allowance. Reconsideration and withdrawal of the objection to claim 16 are respectfully requested.

Claims 10 through 13, 15, 17, 18, and 20 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,115,133 ("Kunkele") in view of U.S. Patent No. 5,262,043 ("Boenigk").

Applicants would like to express thanks and gratitude to Examiners Matthew Hoban and Jerry Lorengo for conducting an Examiner Interview with Applicants on January 7, 2010. It was particularly pointed out to Examiners Hoban and Lorengo that the anthracene oil of Kuenkele cannot be liquid at room temperature. In support, Applicants submit herewith the Declaration of inventor, Winfried Boenigk, Ph.D. ("Boenigk Declaration"). Accordingly, the cited art fails to disclose or suggest a graphitable binder agent that is liquid at room temperature.

As noted, Kunkele does not use a liquid graphitable binder. Rather, Kunkele uses an anthracene oil which volatizes upon subsequent heating. Kunkele discloses that "the impregnating oils of relatively high viscosity promote the wetting of the

grains of the refractory mass". See, col. 3, lines 25-28. Moreover, Kunkele further discloses that the impregnating oil can be composed of unfiltered anthracene oil and low-boiling tar oils such as naphthalene oil. The anthracene oil volatilizes at a later stage of the process at high temperature. Anthracene oil (a 100% coal tar distillate) has no coking value and is not able to form a graphitizable binder. See, Boenigk Declaration.

Moreover, the components of the refractory mass of Kunkele are mixed under cold condition. The pasting with the impregnating oil is also performed under cold condition. At no stage of the proceedings of Kunkele is the liquid graphitable binder recited by claim 1 used.

Kunkele discloses the use of sulfite liquor, which is an aqueous composition of a non-graphitable binder. See, e.g., Examples 1 and 2. Such aqueous binder solutions cannot be used with hydrating refractory materials, e.g. CaO, because they cause an irreversible swelling of the refractory grains. In addition, the sulfite liquor of Kunkele does not form graphitable carbonaceous bonds and thus is not a graphitable binder.

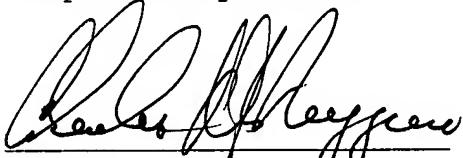
As such, Applicants respectfully submit that the combination of Kunkele and Boenigk fails to disclose or suggest independent claim 10 which requires a "a graphitable binder agent that is liquid at room temperature". Accordingly, claim 10 is in condition for allowance. Claims 11 through 13, 15, 17, 18, and 20 depend from independent claim 10 and are in condition for allowance for at least the reasons given above for claim 10.

Reconsideration and withdrawal of the rejections to claims 11 through 13, 15, 17, 18, and 20 are respectfully requested.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Such action is solicited.

If for any reason the Examiner feels that consultation with Applicants' attorney would be helpful in the advancement of the prosecution, the Examiner is invited to call the telephone number below.

Respectfully submitted,



Charles N. J. Ruggiero  
Reg. No. 28,468  
Attorney for Applicant(s)  
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.  
One Landmark Square, 10<sup>th</sup> floor  
Stamford, CT 06901-2682  
Tel: (203) 327-4500  
Fax: (203) 327-6401

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